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MACKENZIE VALLEY PIPELINE INQUIRY

Phase IV

PANEL 2

ALASKA AND THE ALYESKA PROJECT AND
THE YUKON AND NORTHWEST TERRITORIES
AND THE ARCTIC GAS PROJECT

WITNESSES:

1. Mr. David Boorkman
Mr. David Weinstein

Exhibit #649

URSA

"Impacts of the Alyeska Project
in the Context of the Alaska
Socio-Economic Environment"

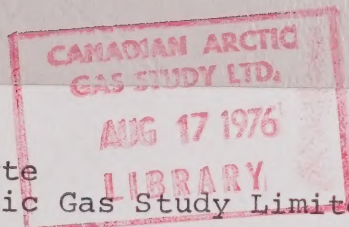
2. Mr. Wayne B. Trusty

Exhibit #650

"Relating the Alaska Experience
to the Northwest Territories
and the Arctic Gas Project"

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- A. Curriculum Vitae - David Boorkman
- B. Curriculum Vitae - David Weinstein



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IMPACTS OF THE ALYESKA PROJECT IN
THE CONTEXT OF THE ALASKA SOCIO-
ECONOMIC ENVIRONMENT

I. INTRODUCTION

Over the past few years, the socio-economic environment of Alaska has changed rapidly. The major cause of this change has been the construction of the Alyeska oil pipeline. However, in order to understand the changes which have occurred because of the Alyeska construction, it is important to understand the socio-economic context within which these Alyeska impacts have taken shape. There are many forces of socio-economic change currently at work in the state, and not all of them are directly tied to the Alyeska project. And even the pipeline activities themselves must be viewed within a clear sense of the socio-economic context of the state if they are to be understood.

The following section (Part II) of this testimony describes some of the socio-economic impacts associated with the construction of the Alyeska pipeline, while Part III describes the overall context which has shaped these impacts. Part II is a factual presentation of what has happened in Alaska over the past two years, while Part III contains a description of the unique Alaska socio-economic environment. The final section of this testimony, Part IV, summarizes the importance of Alaska's socio-economic environment in determining the Alyeska-related impacts and spells out some of the reasons why pipeline impacts in Alaska and the Northwest Territories could vary considerably.

Our testimony does not deal with its Alaska Native Claims Settlement Act. Though the Settlement Act has had a crucial role in accelerating the social, political and economic integration of its Natives into Alaska society, the impacts of its Act are distinct from the impacts caused by Alyeska construction. The purpose of this testimony, on the other hand, is to describe the specific Alyeska-related impacts and to place them in Alaska's overall socio-economic context.

II. ALYESKA IMPACTS

This section of the testimony describes some of the pipeline-related impacts which have occurred in Alaska during the past two years. The impacts discussed have been organized according to the following subject matter categories:

- A. Population
- B. Employment and Unemployment
- C. Labor Shortages and Labor Costs
- D. Revenues and Expenditures
- E. Impacts on Public and Private Goods and Services
 - (1) housing
 - (2) utilities
 - (3) public safety
 - (4) education
- F. Inflation
- G. Small Village Impact

In describing recent socioeconomic impacts associated with the construction of the Alyeska pipeline, this section emphasizes impact in the Fairbanks area, since Fairbanks has served as the major supply point for much of the pipeline project and has, therefore, been a focal point for socioeconomic impact as well.

A. Population

Historically in Alaska, periods of rapid economic development have been characterized by large-scale population in-migration. Because of the economic opportunity created by the "boom" periods and because of the unique lure of Alaska to residents of other states, the various economic "boom" periods have accelerated the normal in-migration of people into the state. The Alyeska-induced boom has been no exception.

According to a year-long survey of in-migrants to Alaska conducted by URSA for the U.S. Department of Labor in 1975, the magnitude of in-migration increased dramatically during Alyeska construction. If the number of in-migrants who responded to URSA's four surveys is extrapolated and averaged over all of 1975, one can estimate that as many as 56,000 people in-migrated to Alaska during 1975. These people were not tourists, nor were they Alaska residents, nor individuals travelling to Alaska on business. Rather, they were people in-migrating to Alaska because they had a new job in Alaska, because they hoped to find a new job in Alaska, or because they were dependents of these new employees or new job-seekers.

In addition to URSA's survey of population in-migration, the Alaska Department of Labor has estimated that Alaska's statewide population increased from 330,365 to 404,634 or 22.5% from July 1, 1973, to July 1, 1975. Similar population increases have occurred for the three cities most affected by Alyeska--Fairbanks, Anchorage and Valdez.

The population of the Fairbanks North Star Borough increased from 38,091 on July 1, 1973, to 63,350 on July 1, 1975--an increase of 66.3% in only two years. Valdez, the terminus of the Alyeska pipeline, also mushroomed from a population of 1,173 in January 1974, to 2,271 in July 1974, and finally to 6,670 in July 1975--an increase of 469% in 1-1/2 years. Finally, Anchorage also has grown significantly, from 149,440 in September 1973, to 179,883 in September 1975--an increase of 20.4%.

These population increases are well-known, but in and of themselves they are not very useful statistics. However, as explained more fully in later sections these increases have caused serious problems. First, there has been a significant lag between population increases and corresponding increases in revenues. This revenue shortfall has led to inadequate budgets and inadequate expenditures for public goods. Second, the revenue shortfall has meant that public services simply have not kept up with population growth. Electricity, sewage systems, telephone service, police and fire protection--none has expanded in proportion to the increase in population. By American standards Alaska is an extremely unpopulated state and has the limited service delivery capability of an unpopulated state. It has not been able to absorb the huge numbers of in-migrants and to provide all of its population--both old-time residents and new in-migrants--with an adequate level of public services.

B. Employment and Unemployment

It is extremely well-publicized that Alyeska has greatly increased employment in Alaska. During the second quarter of 1975, the peak direct Alyeska workforce reached a high of 24,400 workers. Moreover, given the employment multiplier of 1.5 commonly used in Alaska, it is estimated that Alyeska created a peak of approximately 61,000 jobs in Alaska (24,400 direct jobs and 36,600 secondary and indirect jobs).

Moreover, in addition to this Alyeska-induced increase in employment, unemployment in Alaska has also risen because of Alyeska. This has occurred for two reasons. First, as explained in the previous section, tens of thousands of unemployed people have in-migrated to Alaska in search of work during the years of Alyeska construction. In URSA's recently completed in-migration study for the U.S. Department of Labor, it was found that fully 35% of in-migrant adults were unemployed. Second, the Alyeska project has also caused large numbers of resident Alaskans to enter the labor force for the first time (e.g., Natives, housewives, students). These resident Alaskans who have entered the labor force, but who have been unable to find work, have joined the ranks of the unemployed for the first time in Alaska. With respect to the private sector, there appears to be a shortage of real estate appraisers in Fairbanks. Both series are appraised. Official state totals do not break down unemployment into in-migrant and resident categories but rather include both residents and in-migrants in overall totals. Statewide, although pipeline employment and total employment reached record levels during the past year, the number of unemployed workers rose from 16,400 in January, 1975, to 22,900 in January, 1976. The statewide unemployment rate also increased from 10.8% to 12.2% during this same period. Even in Fairbanks, where pipeline activity has been the most intense, the total number of unemployed workers also increased last year, though the unemployment rate dipped slightly from 1974 to 1975. The Fairbanks Health Center has had difficulty in attracting and keeping good clerical help since the state wage scale. It should be noted that the "official" state unemployment totals actually understate the "actual" unemployment rate. Many unemployed in-migrants, though in fact without jobs, are not officially counted by the state as being unemployed. In order to be officially listed in unemployment totals, one either has had to have been laid off in Alaska from a job in a "covered" industry (that is, in an industry in which unemployment insurance is paid), or one has to register for work at a state employment office. Obviously, unemployed in-migrants would not have been laid off from a "covered" industry in Alaska. Information and qualified staff is not available.

C. Labor Shortages and Labor Costs

The high-paying construction industry in Alaska has drawn and is drawing qualified workers from other lower-paying industries. Just as capital in Alaska is being channeled into the areas of the highest opportunity cost (oil and gas construction), many employees in lower-paying businesses are also leaving their jobs when oil- or gas-related jobs become available. Thus, in Alaska, there is the anomalous situation of high unemployment and, at the same time, important jobs going unfilled.

Both the private and the public sectors have been affected by the high labor turnover rate in Alaska. With respect to the private sector, there appears to be a shortage of real estate appraisers in Fairbanks. Both banks and appraisal companies have stated that there is a 2-3 week waiting period before one can even obtain an appraisal. This delay extends the period of time needed to buy or sell a house and, therefore, exacerbates the bottlenecks in the supply of housing. Moreover, private construction firms that perform non-pipeline work are having difficulty hiring craftsmen to perform work necessary to bring buildings into compliance with the local code requirements, and many workers appear to be doing jobs that are beyond their ability or training.

The public sector has also been affected. The Fairbanks Health Center has had difficulty in attracting and keeping good clerical help since the state wage scale is lower than the wages offered by the pipeline contractors. In addition, the State Environmental Health Section has reported that low state pay scales have restricted filling of four sanitarian vacancies in the Northern Regional Office and Southcentral Regional Office. As a final example, the U.S. Postal Service in Fairbanks has had constant problems in retaining personnel and in keeping its self-service units in working order. The employee turnover rate last fiscal year in Fairbanks was 42%, and, as a result, the self-service postal units have been underutilized because they are frequently in need of repair and qualified repair staff is not available.

D. Revenues and Expenditures

Because of the rapid population increase, state and local budgets in Alaska have grown enormously. However, revenue sources have not grown rapidly enough to sustain the desired level of public expenditures. Both state and local governments have begun to curtail their budgets and simultaneously to propose new taxes. The state has already spent the \$900 million that it received from the Prudhoe Bay oil and gas lease sale. In order to balance the proposed budget of \$674.4 million in FY 1977, the governor has not only proposed substantial new taxes but has also proposed that the payment date of certain existing taxes paid by the oil companies be moved forward three months, from September 30, 1977, to June 30, 1977--the very last day of FY 1977. Even when oil begins to flow in mid-1977, oil revenues will not be as high as previously estimated because, in order to increase revenues last year, the state passed a 20-mill ad valorem tax on petroleum reserves. This reserves tax is merely a credit or borrowing against future severance taxes, and thus current payments by the oil companies for this reserves tax will be subtracted from the severance taxes that they will pay once oil begins to flow in 1977.

This problem of a revenue shortfall can also be illustrated in the Fairbanks North Star Borough, where increases in revenue sources have lagged considerably behind increases in population. As stated above, the population of the borough increased 66.3% between 1973 and 1975. (The population increased 32.1% between 1973 and 1974.) On the other hand, property tax revenues for the borough increased only 16.7% between 1973-1974 and 1974-1975, and sales tax receipts rose 9.9% in this same period. The lag between population impact and increased revenues has aggravated the intensity of Alyeska impacts since local funding sources have not grown fast enough to keep up with the demand for more and better public services.

The Alyeska project has also exposed and exacerbated pre-existing weaknesses in Alaska's intra-state revenue sharing mechanisms. State revenues are currently distributed to local governments on a per capita basis. The existing per capita formula, however, often does not provide adequate funds to extremely small communities, including those communities which have been affected by Alyeska construction. A bill currently before the Alaska legislature would correct this deficiency and provide a minimum grant to all communities, regardless of population. Moreover, the Alyeska project also created entirely new problems for intra-state revenue

sharing. In order to assist communities most severely "impacted" by Alyeska construction, special impact assistance funds were provided by the state to certain specified communities. However, these funds were far too restricted in terms of the purposes for which they could be used. The funds were primarily for operating expenses; the only capital expansion projects for which the impact funds could be used were school facilities, parks, and recreational equipment.

E. Impacts on Private and Public Goods and Services

The supply of most private and public goods simply has not kept up with demand. With respect to private goods (especially housing), the Alyeska project has both drained off needed pools of skilled labor and has also affected capital flows in other areas in the private sector. In addition, Alaska's geographical isolation from the rest of the United States and the major distances between cities within the state have traditionally created supply shortages and "bottlenecks" in the distribution of goods in Alaska.

With respect to public goods (electricity, sewerage, telephones, police and fire protection, etc.), the Alyeska project has also drawn away needed skilled labor. Many public officials and employees have left their positions because of higher paying opportunities in the private sector. Moreover, the revenue shortfall described above has meant that governmental agencies simply have not had adequate funds to provide services demanded by the expanded population nor to increase public salaries.

While the entire spectrum of private and public services has been strained by Alyeska construction, the more important impacts have been on housing, utilities, public safety, and education. The following descriptions of the impacts within these four areas are representative of the Alyeska impact on other services as well.

1. Housing

As is well-publicized, the clearest example of a shortage of private goods in Alaska today is housing. As in the rest of the U.S., the state housing industry is primarily private. The private sector is responsible for the financing of far more homes than is the public sector, and even publically financed or subsidized homes

and apartments are built by private industry. Moreover, federally subsidized housing programs are designed for cities in the lower 48 states, and often are not able to address the Alaskan housing problems.

In addition, the quality of housing in Alaska has always been substandard. The high cost of construction, the widespread poverty in Alaska (especially in rural and Native communities), and the state's enormous size and small population all contribute to Alaska's ranking far below the U.S. national average in every index of housing quality.

The housing vacancy rate in Fairbanks and Valdez is nearly zero. Though the housing construction capacity of these cities (and elsewhere in Alaska) is clearly increasing, new housing starts still are falling far short of local housing needs. As projected by the April, 1975, housing market survey of the U.S. Department of Housing and Urban Development (HUD), a total of 1065 apartments and 665 single-family homes will be needed in Fairbanks by 1977.

However, only 212 apartments and 412 single-family units were begun in Fairbanks in 1975. The number of new apartments actually begun in 1975 comprised only 21% of the HUD estimated needs. Moreover, since the great majority of housing units in Fairbanks are rental units (60% v. 40% for owner-occupied units), this small (21%) percent of estimated need for apartments is especially critical.

With respect to single family units, the number of such units actually begun in 1975 comprised 62% of the HUD estimates of need. However, this statistic makes the supply/demand imbalance appear less serious than it is. First, the prices of the units built may not be "equilibrated with" or match the price range of the single-family housing units actually needed. Second, it is likely that the HUD estimates of need seriously underestimate the future housing demands of Fairbanks. The HUD estimates are based on projections of population for Fairbanks which, in fact, are too low. The population projected by HUD for 1977 is less than the current population.

2. Utilities

The utilities systems in Alaska have also been overloaded, especially in the Fairbanks area. The newly-completed sewer system in Fairbanks has the capacity to serve only the pre-boom population. There are no plans to expand it beyond this capacity. Sewer service is available only within the city limits, although much of the current population and industrial expansion are located in the North Star Borough and, therefore, are not served by the existing sewage or water system. In many of these areas, discontinuous permafrost is also a problem.

Electrical service to the city of Fairbanks is provided by the Municipal Utility System (MUS), while Golden Valley Electrical Association (GVEA) provides power to the Borough. The MUS depends almost entirely on coal for its fuel, but GVEA is dependent upon both coal and oil. MUS has been able to operate without interruptions this winter, primarily because its supplies have been consistent, and the demand for power has been relatively stable since most of the local growth has occurred in the Borough outside of the city limits. The GVEA, however, had two power outages in December and has urged its customers to purchase home generators for future emergencies. GVEA has had problems both with the supply of oil from Tesoro and the rapid increase in demand within its service area.

In addition, the severe "winter peak" in demand for electrical service is far greater in Fairbanks than in the lower 48. GVEA and MUS must make capital expenditures large enough to supply the heavy peak winter demand for lighting and heating; however, demand during the rest of the year is far lower, and much of the capacity of the electrical system is unused. In fact, in April of 1975, GVEA announced that there would be a moratorium on new electric heat installations, and GVEA's general manager attributed this decision to the winter peaking for the electric load.

Telephone service in Fairbanks is often erratic at best. The system is a relic of the town's growth during World War II. Moreover, the system was seriously damaged during the floods of the mid-1960's and has never been adequately repaired. The Alyeska-induced population growth has simply placed additional strains on an already inadequate system. Requests for new telephone connections are simply deferred, and the backlog doubled in the past year. Complaints have increased 69%, while service orders completed have actually declined 20%.

3. Public Safety

Crime statistics in the United States in general and in Alaska in particular are not totally reliable indices of criminal behavior. The reporting techniques vary from jurisdiction to jurisdiction, as do the emphasis which criminal justice officials in different areas give to the enforcement of various types of criminal laws.

Nevertheless, the statistics that are available indicate that, contrary to public opinion in sections of the lower 48, crime in Alaska has risen no faster than the increase in population. In other words, there does not appear to be a "crime wave" caused by Alyeska construction.

Stateside crime statistics are compiled by the Federal Bureau of Investigation (FBI). However, there are long delays in gathering the necessary information, and the latest statewide crime statistics available are for 1974 only. The 1975 statewide statistics will not be available until August of this year. However, crime statistics up to and including 1975 are available for specific jurisdictions within Alaska.

Current reports are available from the Division of State Troopers (Department of Public Safety). The State Troopers are responsible for law enforcement in all areas of Alaska that are not served by municipal police departments or federal agencies. Their area of responsibility includes approximately 98% of the land area of the state and 50% of the total population. According to the annual report published by the Department of Public Safety on January 22, 1976, the number of major (Part I) offenses reported to the State Troopers increased only by 24.7% from 1973 to 1975. (Part I crimes include homicide, rape, robbery, burglary, larceny and auto theft.) Although statewide population statistics are not available for those areas under the jurisdiction of the State Troopers, it is probable that the population of these areas increased by approximately 25% from 1973 to 1975.

All other offenses reported to the Troopers (minor or Part II crimes) increased more rapidly from 1973 to 1975--at a rate of 35.6%. However, the increases in some of these minor categories may well be a result of changed attitudes concerning

what is or is not a crime. For example, in many communities of Alaska carrying and possessing a concealed weapon has traditionally not been considered criminal activity. However, because of Alyeska-induced population growth and increased social tension, many law enforcement agencies now regard carrying and possessing a weapon as a criminal offense. Table 2 shows the growth of Part I and Part II offenses reported to the State Troopers from 1973 to 1975.

TABLE 2
Offenses Reported to the State Troopers

	<u>1973</u>	<u>1974</u>	<u>1975</u>	<u>1973-75%</u>
Part I (Major)	4,832	5,188	6,025	24.7%
Part II (Minor)	4,987	5,601	6,764	35.6%

Source: Annual Activity Report, 1975
Alaska Department of Public Safety, January 22, 1976

In addition, the Fairbanks North Star Borough Pipeline Impact information center has reported on the increased number of criminal complaints filed with the Fairbanks police department. Criminal complaints have increased 93% between 1973 and 1975, according to the Information Center. However, as stated above, the population of the North Star Borough increased 66.3% during these same two years. In addition, most of the large increases in complaints occurred in categories that had extremely few complaints in 1973 and earlier years (carrying and possessing a weapon, interfering with a police officer, and prostitution). As mentioned previously, it is very likely either that the Fairbanks community as a whole and its local law enforcement personnel are now reporting activities that previously were not considered criminal, or it is likely that there have been shifts in community attitudes about the seriousness of various types of anti-social behavior.

4. Education

The one area in which Alyeska impact has not been as great as projected is education. Though the school systems in Fairbanks, Anchorage and Valdez have all been strained, the problem has been less serious than had been anticipated.

Statistics showing the increase in students are readily available. The high schools in Fairbanks are in double session, and enrollment in Valdez increased by 171 last year to a current level of 812. On the other hand, the increase in the number of students has been, on the average, more moderate than projected. Enrollment in the Anchorage school system has risen from 35,871 in 1973 to only 40,277 last year; and the number of children enrolled in the Fairbanks system actually declined from 9,021 in September 1974 to 8,843 in May, 1975.

Obviously, a relatively small number of the in-migrants are bringing their children to Alaska. The Fairbanks North Star Borough Pipeline Impact Information Center reports that the ratio of new children in Fairbanks to pipeline workers fell throughout most of 1974 and 1975, reaching the surprisingly low ratio of 1:131 in June, 1975. Moreover, in URSA's own in-migration study it was found that statewide only 9.9% of all new in-migrants to Alaska were bringing their children, far fewer than had been anticipated.

F. Inflation

Though the cost of living in Alaska has always been higher than in the U.S. as a whole, until the Alyeska boom the differential between Alaska and the lower 48 had been decreasing. However, the inflation rate in Alaska and in Anchorage in particular is now greater than in the lower 48, and thus the differential in the cost of living between Alaska and the U.S. is now increasing. The cause of Alaskan inflation during the Alyeska project has been both demand pull (e.g., the housing shortage) and cost push (e.g., the high Alyeska wages). Moreover, though the cost of living in Fairbanks has always been higher than Anchorage's, it now also appears to be increasing at a faster rate.

The data supporting these statements are incomplete, since the U.S. Bureau of Labor Statistics (BLS) does not survey either Fairbanks or the entire State of Alaska. The only complete survey is a consumer price index (CPI) compiled for the Anchorage metropolitan area. According to the Anchorage CPI, the cost of living in Anchorage rose 13.8% in 1974 and 11.1% in 1975--rates far above the U.S. average.

TABLE 3

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<u>DATE</u>	<u>(October 1967 = 100)</u>	<u>ANNUAL % INCREASE</u>
January 1974	137.2	
April 1974	141.8	
July 1974	146.4	
October 1974	152.9	
January 1975	156.1	13.8% (1974-1975)
April 1975	163.9	
July 1975	168.0	
October 1975	171.9	
January 1976	173.5	11.1% (1975-1976)

Source: U.S. Department of Labor, Bureau of Labor Statistics,
February, 1976

With respect to the cost of living in Fairbanks, the University of Alaska's Institute for Social, Economic and Government Research has calculated that the cost of goods and services in Fairbanks is 12% greater than in Anchorage. Similarly, Fairbanks' construction costs have been estimated by the military to be 20% higher than in Anchorage.

Further, as stated above, inflation in Fairbanks is also now substantially higher than in Anchorage. The Fairbanks North Star Borough Pipeline Impact Information Center has conducted market basket surveys for Fairbanks starting in September, 1974. Comparing the results of these surveys with comparable market basket surveys for Anchorage, it appears that in the last quarter of 1974 Fairbanks' food prices increased 6%; Anchorage's food costs for the same items in the same time period increased 3.7%. Even more dramatic is the difference between the two cities during the first six months of 1975. While Anchorage's food costs increased only 1.9%, the cost of food in Fairbanks increased 10%.

Housing, of course, is the most well-known example of inflation. The Impact Information Center in Fairbanks also conducts rental housing surveys, and a recent survey shows that between December, 1974 and December, 1975, the average rents in Fairbanks increased approximately 50%. Moreover, the number of apartments advertised for rent dropped from 112 in December 1974 to 82 in December 1975.

TABLE 4

<u>Type of Unit</u>	<u>Avg. Rent w/util.</u>			<u>Avg. Rent w/out util.</u>			<u>Number of Apts. Avail.</u>	
	<u>1974</u>	<u>1975</u>	<u>% inc.</u>	<u>1974</u>	<u>1975</u>	<u>% inc.</u>	<u>1974</u>	<u>1975</u>
Furnished Apartments								
Efficiency	225	400	44%	213	350	64%	18	5
1 bedroom	264	453	72%	261	379	45%	41	22
2 bedroom	446	425	(4%)	324	510	57%	14	8
3 bedroom	600	-	-	305	450	48%	4	3
Larger	-	-	-	-	-	-	0	0
Unfurnished Apartments								
Efficiency	-	225	-	-	288	0	1	5
1 bedroom	358	504	41%	250	325	50%	10	12
2 bedroom	381	527	38%	408	488	20%	21	18
3 bedroom	400	650	64%	375	534	42%	3	8
Larger	-	550	-	-	-	-	0	1

G. Small Village Impact

The Alyeska project has had an impact on the small villages in the state, but no detailed survey of that impact has been conducted. Only some general statistics are available. A survey of 15 small villages, completed in June, 1975, indicated that the percentage of rural people currently or previously employed on pipeline work is low, ranging from 22.2% of the total population for Allakaket to 2-3% for Nenana and Anderson. Many Natives also complained about the difficulty of obtaining pipeline work, since most unions require that all employees register at the union hiring halls in Fairbanks and be present at the hiring halls when the call for employment is made.

In addition to the expense and difficulty of travelling to Fairbanks, rural Natives have been dissatisfied with the lack of information concerning pipeline employment, the union hiring hall procedures, and the relationship between the various federal, state and private Native organizations (such as the Alaska Federation of Natives, the Bureau of Indian Affairs, and the State Department of Labor).

Despite this low percentage of rural Native employees¹, the pipeline is having a significant effect in terms of loss of manpower and leadership, decreased tax revenues, and poorer transportation services for the rural villages. Those Natives who leave their communities to seek pipeline employment often are the most talented and take with them vital skills, such as the ability to maintain the local pumphouse and/or generator. This migration of skilled Native workers away from the villages has, in some communities, resulted in a leadership vacuum, since the skilled workers who leave are also often the community leaders. In addition, the loss of village population has created both a smaller tax base and also a diminished cash flow, since much of the income earned on pipeline or pipeline-related employment is spent in the larger cities. Finally, the Alyeska pipeline has diverted plane service from small rural villages and has caused less frequent mail and freight deliveries.

¹Statewide, a significant number of Natives have been hired by Alyeska. It has been estimated that 5,100 individual Natives have worked for Alyeska and that 8,000 total jobs have been filled by Natives. These totals are a result of the four major Native employment programs now in effect in Alaska: 1) the Alaska plan, an affirmative action plan signed by labor unions, pipeline contractors and subcontractors, and various governmental agencies; 2) the equivalency panels, which certify Natives as qualified union journeymen or apprentices on the basis of "equivalent" past work experience; 3) the two minority employment programs signed by the Alyeska Pipeline Service Co. itself and approved by the U.S. Department of Interior; and 4) the state-operated Alaska State Manpower Utilization System (ASMUS), which coordinates various Native employment and training programs and which travels to rural Native villages in order to induce Natives to fill out state job application forms.

III. SOCIOECONOMIC CONTEXT OF PIPELINE IMPACT IN ALASKA

The preceding section of this testimony describes some of the recent impact associated with the construction of the Alyeska pipeline. This impact is currently posing serious problems for the State of Alaska, and it is, naturally, a major concern for Canadians who are responsible for anticipating the socio-economic consequences of major development projects in the Northwest Territories. Implicit questions have run through the hearings in Yellowknife: will the negative impacts of the Alyeska project be repeated in the Northwest Territories? Is serious dislocation of the social and economic environment inevitably associated with a major pipeline project in the north? These questions go to the heart of this inquiry, but it is clear that simplistic answers will serve no one. Instead, the need is for a conceptual framework that will make it possible to understand the underlying reasons for what has happened in Alaska.

This section of the testimony will discuss the factors which have created the current socioeconomic impact in Alaska. It speaks to the question: what is the socioeconomic context which has shaped Alyeska impacts? And, implicitly, it addresses the question as to whether gas pipeline impacts in the Northwest Territories will parallel oil pipeline impacts in Alaska.

The current socioeconomic environment of Alaska has been primarily shaped by the recurrent dynamic of population in-migration during boom periods in general and during Alyeska construction in particular. An explanation of this in-migration and the state's inability to plan for and mitigate its negative effects, is essential if one is to understand the Alyeska impacts. This portion of the testimony describes three aspects of this in-migration:

- 1) The Historical Patterns of Population In-Migration;
- 2) The Current In-Migration Induced by Alyeska; and
- 3) The Influence of In-Migration upon Alyeska Impacts.

A. Historical Patterns of Population In-Migration

Historically, the most significant factor which has characterized the socioeconomic environment of Alaska is the degree to which highly visible economic development has led to major "boom" periods, during which thousands of persons have entered the state. The population of Alaska, like any other growing area, continually increases because of "normal" in-migration. However, during "boom" times, in-migration to Alaska has increased at a vastly accelerated rate. These major economic boom periods have been characterized by 1) a massive population in-migration in response to the boom, and 2) a levelling-off phase as the boom has subsided and some out-migration has occurred.

Alaska's susceptibility to such boom-related in-migration is well-documented. At least four significant boom periods occurred prior to the discovery of oil and gas at Prudhoe Bay, and they have operated to expand the population of Alaska from an overwhelmingly Native population of 33,000 in 1880 to an overwhelmingly non-Native population of 302,173 in 1970.

The state's first major population boom was caused by the Alaska gold rush of 1898. It drew thousands of new residents to Alaska and nearly doubled the state population between 1890 and 1900. The second major boom was closely tied to the rapid build-up of the U.S. military presence following World War II. Military population growth and the resulting civilian in-migration which it stimulated served nearly to double the Alaskan population once again. Between 1940 and 1950, the population of the state grew from approximately 73,000 to nearly 130,000.

The third major boom occurred during the 1950's with the construction of the DEW-line and other military facilities, and the population between 1950 and 1960 jumped once again, from approximately 130,000 to 226,000. Finally, although the military population of the state declined slightly between 1960 and 1970, the discovery and production of oil and gas on the Kenai peninsula in the 1960's sustained the fourth major population boom in the state.

Boom-related in-migration to Alaska is caused by a variety of factors. Alaska has a special significance for residents of the United States. It is the last frontier in America, an historic "safety valve," and it continues to represent a place in

which a new start can be made, and in which it is still possible to make a quick fortune. In addition, although Alaska is much less developed than other states, it does have a socio-economic infrastructure that makes the state more attractive to potential in-migrants than other less developed areas. Finally, there is no constitutional way for either the federal or state government to control the movement of residents from other states to Alaska. Any person can in-migrate to Alaska, live there for 30 days, and then (for the purpose of voting in Alaska) constitutionally claim that he is an Alaska resident.

B. Alyeska-Induced Population In-Migration

Since the discovery of oil and gas at Prudhoe Bay, Alaska has experienced two more population booms. The first was a "false boom" which occurred in 1970-1972. Triggered by the discovery of North Slope petroleum deposits, the sale of oil and gas leases, and the anticipation of imminent oil pipeline construction, the state economy experienced rapid growth, and many residents of the lower 48 states in-migrated to Alaska in search of high-paying jobs. Although the initiation of pipeline construction was delayed and economic decline resulted from the delay, the "false boom" provided a foretaste of the Alyeska boom that was to follow. It reaffirmed the degree to which boom-related in-migration continues to be a factor in Alaska.

The current "boom" being experienced in Alaska is tied to the construction of the Alyeska oil pipeline. The special characteristics of Alaska, the widespread publicity and immense magnitude of the Alyeska project, and the prospect of high paying pipeline construction jobs have combined to attract tens of thousands of in-migrants from other states. Massive in-migration to Alaska started when large scale Alyeska hiring began in 1974, and continued through most of 1975. URSA's survey indicates that as many as 56,000 people may have in-migrated to Alaska in 1975 alone. Moreover, it is highly likely that the period of large scale Alyeska-induced in-migration extended over a two-year hire-up period, 1974 and 1975. Thus, our survey for 1975 documents only a portion of the total population in-migration caused by Alyeska.

The Alyeska-induced in-migration has been aggravated by three crucial factors--¹
 1) local or resident hire, 2) the location of union hiring halls in Fairbanks, and
 3) the lack of adequate state planning. These three factors have operated to
 intensify the level of Alaska's historic in-migration problem and to exacerbate
 the negative impacts caused by Alyeska.

With respect to the first factor, political reality in Alaska made it inevitable
 that local or resident Alaskans would be given preference in the hiring of pipeline
 workers. Thus, the Local Hire Act was passed in 1972, mandating that for the
 purposes of oil and gas leases Alaska residents were to be given preference for
 new jobs. The Act has been enforced primarily by the hiring of Alyeska workers
 out of the local Fairbanks Union hiring halls. The role of the Fairbanks unions has
 been the second crucial factor in the Alyeska-induced population in-migration. In
 order to secure an Alyeska job, one has had to travel to Alaska and to Fairbanks in
 particular. As URSA's in-migration survey documents, tens of thousands of people
 have, in fact, in-migrated to Alaska in search of work. In all likelihood, many of
 these in-migrants immediately claimed that they were Alaska residents (as required
 by the Local Hire Act) and then sought Alyeska employment. Many other in-migrants
 sought and found secondary and indirect (as opposed to direct) Alyeska jobs, and
 still others found employment by filling vacancies created when existing Alaska
 residents left their jobs for Alyeska-related work.

N.B.

Finally, the third crucial factor which has increased the level of in-migration was
 the lack of adequate state planning. The state, in the Local Hire Act, insisted
 that resident Alaskans be given preference for Alyeska jobs; yet the state did not
 (until it was too late) create the enforcement mechanisms necessary to ensure that
 only bona fide Alaska residents (instead of recent in-migrants) were actually given
 preferential employment opportunities. Moreover, by encouraging the hiring of
 nearly all of the Alyeska workers at the local Fairbanks union halls, the state
 implicitly required that residents of other states seeking pipeline work come to
 Alaska to qualify for those jobs.

These three factors--the Local Hire Act, the hiring by the Fairbanks unions, and
 the lack of adequate state planning--have been crucial in causing the high level
 of in-migration during the Alyeska boom period. Each of these factors, and the
 role each has played in inducing the in-migration, is discussed in greater detail
 on the preceding page.

Local Hire

When the Alaska State Legislature considered the thousands of jobs which were to be created by the Alyeska pipeline, it responded in a normal political manner. It attempted to insure that as many of those jobs as possible went to existing Alaska residents. The Local Hire Act was passed by the State Legislature in 1972, and it states that Alaska residents must be given employment preference in projects relating to oil/gas leases. A "resident" is defined as one who: "(1) except for brief intervals of military service has been physically in the state for a period of one year immediately prior to the time he enters into a contract or employment; and (2) maintains a place of residence within the state; and (3) has established a residency for voting purposes within the state; and (4) has not, within the period of required residency, claimed residency in another state; and (5) shows by all attending circumstances that his intent is to make Alaska his permanent residence." (Sec. 38.40.090).

Despite the very specific definition of an Alaska "resident" in the Local Hire Act, the enforcement of this Act has remained a problem. Theoretically, the Fairbanks union hiring halls have been obligated to give preference in hiring to all long-time "resident" Alaskans as defined by the Local Hire Act. However, in practice the unions have given preference to persons who have claimed Alaska residency but who have not strictly met the specific qualifications of the Act. For example, traditionally the prime evidence of one's Alaska residency has simply been the possession of an Alaska driver's license, and in order to obtain such a license all one has to do is give some basic personal information such as one's name, address and birthdate, and then pay a nominal fee. This can be done on the day one arrives in Alaska. Moreover, for the purpose of voting in Alaska, a new immigrant need only live in Alaska for 30 days before he can claim his constitutional right to vote as an Alaska resident.

In order to remedy this situation of recent in-migrants claiming to be Alaska "residents," the State Department of Labor (Wages and Hours Division) in March, 1974, instituted a process called the Certification of Residency. A certificate is given only to those Alaskans who can satisfy the five criteria for residency

set forth in the Local Hire Act (Sec. 38.40.090; see above). Of the five criteria, the one that the Department of Labor relies on most heavily is number five--that the person "shows by all attending circumstances that his intent is to make Alaska his permanent residence." This criterion can be satisfied in a variety of ways, such as purchasing property in Alaska, moving one's family to Alaska, putting his or her children in Alaskan schools, etc. Of course, the state's reliance on this criterion has only reinforced the historical pattern of in-migration.

Although the certification process was instituted in early 1974, the state did not initially design procedures which would ensure that only long-term, bona fide residents received job preference. However, today, in order to receive preferential treatment in the hiring of pipeline workers, a prospective worker must present his certification of residency card to the union. Moreover, on March 9, 1976, the State Commissioner of Labor ordered that all residence Alaskans (no matter how low their union seniority is) who have received a certification of residency must be dispatched by the unions before any non-resident is dispatched. As of January 31, 1976, 17,099 certification cards had been issued by the State Department of Labor.

The percentage of "resident" Alaskans working on the pipeline has been substantial. According to the Alaska Department of Labor, the percentage of resident Alaskans working on the pipeline increased from 28.4% in the third quarter of 1974 to 53.9% in the fourth quarter of 1974. Thereafter, the percentage of resident Alaskans has risen very slowly, reaching 66.7% in the last quarter of 1975.

TABLE 5

<u>Date Quarter Ends</u>	<u>Percentage of Resident Alaskan Workers</u>
September 30, 1974	28.4%
December 31, 1974	53.9%
March 31, 1975	57.0%
June 30, 1975	59.4%
September 30, 1975	60.1%
December 31, 1975	66.7%

Source: Ken Dunker, Alaska Department of Labor,
March 10, 1976

These statistics may be somewhat inexact, however. As stated above, the definition of who exactly is an Alaska "resident" varies depending on whether one relies on a certification of residency, on a worker driver's license, or on the fact that during the last election a worker voted in Alaska. In all likelihood, since initially in-migrants were able to avoid the requirements of the Local Hire Act and still claim to be residents of Alaska, the early figures overstate the percentage of Alyeska workers who actually were one-year residents of the state. Only recently have the enforcement provisions of the Local Hire Act and the certification of residency been strengthened so as to ensure that one-year residents in fact receive employment preference.

However, the eventual tightening of the local hire qualification process has been too little and too late. The major hire-up period for the Alyeska pipeline was in 1974 and 1975. It was during this period that tens of thousands of residents of other states entered Alaska in search of a pipeline job. Without effective enforcement mechanisms in place during those critical years, the Local Hire Act did little to reduce the influx of Alyeska-related in-migrants.

Fairbanks Hiring Halls

If spotty enforcement of local hire provisions encouraged in-migration, the location of Alyeska union hiring halls in Fairbanks added to the problem. The majority of Alyeska construction workers have been hired at Fairbanks hiring halls; and the location of the halls, and the use of certain seniority, registration, and dispatch procedures have all been factors in the Alyeska in-migration dynamic.

The heavy reliance on Fairbanks union hiring halls obviously has meant that almost all pipeline jobs have been obtained in Fairbanks and not in the lower 48. In turn, the fact that pipeline employment can be found only in Alaska and in Fairbanks in particular has reinforced the historical tendency of people to in-migrate to Alaska during periods of rapid economic development.

The union halls perform the key functions in hiring workers for the Alyeska pipeline. The Trans-Alaska Pipeline System Project Agreement, which outlines the relationship between Alyeska and most of the relevant labor unions, stipulates that

pipeline contractors shall exclusively use the local unions' job referral systems. All workers are hired by union dispatch from the local union hiring hall. All but two unions (Pipeline Welders, Tulsa, Oklahoma; Operating Engineers, Seattle, Washington) have their local headquarters in Fairbanks.

Membership and seniority in local unions are the primary criteria that determine who is hired through the union hiring hall. Although Part 6 of Article VI of the Pipeline System Project Agreement states that union membership shall not be a factor in determining who is hired, in fact all of the unions use some version of the tenured or "A-B-C" classification system for job referral.

In general, the first workers hired are from the "A" or highest seniority list, the second group is from the "B" list, and the final workers hired come from the "C" or lowest seniority list. Most unions use this 3-category or "A-B-C" classification system, although some unions classify workers according to 4 or more categories.

Obviously, each union has a different variation of the "A-B-C" referral system. What is important is that unions have been able to control who is hired by specifying both where the prospective employee has worked (or lived) in the past and the minimum number of hours worked under union jurisdiction.

The union hiring halls control who is hired for pipeline work in other ways as well. First, most unions require that a worker register with the union in person at the Fairbanks hiring hall. Second, when a specific job call or dispatch is made, most of the unions require that the registered person be present at the union hiring hall. The job calls are generally made at the specified times on specified days of the week. Some--but not all--of the unions will attempt to contact a worker who has been called but who is not present at the hiring hall when the call is made. Finally, there is a maximum 48-hour limit between the time that a contractor requests a worker for a particular position and the time that the union must dispatch a worker.

These three procedures utilized by the union hiring halls have simplified and centralized the hiring procedures and have allowed the unions to supply workers as efficiently and as quickly as possible. However, these procedures have also increased the level of inter- and intra-state migration of prospective workers to Fairbanks. Because of these procedures, prospective workers must be present at Fairbanks for registration, job calls, and dispatch.

Lack of State Planning

The third crucial element in the recent Alyeska-induced population in-migration has been the lack of adequate state planning. Governmental planning in Alaska (as in the United States as a whole) has generally been less comprehensive than in other developed nations. In general, Alaska has relied more on private entrepreneurship and decision-making to allocate resources and shape economic development. State planning in Alaska has tended to be short-term and non-comprehensive. And this fact has had much to do with the type and intensity of Alyeska-induced socioeconomic impacts.

In Alaska, state planning initiatives have never focussed on the key element underlying most of the Alyeska impacts--boom-related in-migration. The state passed the Local Hire Act giving employment preference to Alaska residents. Yet the state failed to create enforcement provisions which would ensure that only people who had lived in Alaska for more than one year would in fact receive this employment preference. Thus, prospective workers in-migrated to Alaska, immediately claimed Alaska residency, and (in all likelihood) many eventually found pipeline or pipeline-related work. Only recently have the certification of residency provisions been strengthened sufficiently so as to guarantee preferential hiring for bona fide one-year Alaska residents.

In addition, by acquiescing in and encouraging the hiring of nearly all Alyeska workers out of the Fairbanks union halls, the state made it essential that people seeking pipeline work had to in-migrate to Alaska and to Fairbanks in particular. If one wanted a pipeline job, he or she had to go to Fairbanks. The fact that, because of the Local Hire Act, these recent in-migrants did not receive job preference only exacerbated the situation. Thousands of in-migrants have travelled to Alaska in search of a pipeline job, have been unsuccessful, and have remained unemployed and dependent on a variety of state social service delivery systems.

State planning in Alaska has also been inadequate in other ways. State revenue sharing with local governments and state impact assistance have failed to mitigate many Alyeska impacts. For example, though the state did authorize special impact

funds for communities most seriously affected by Alyeska construction, these impact funds were not adequate. They were designed primarily for local government operating expenses; they could be used for needed capital expenditures only if they were spent on school construction (relocatable classrooms) and for parks and recreation. Obviously, in many communities these restrictions on the use of revenue sharing funds did not fit local impact needs.

In summary, State of Alaska planning activities have been remedial rather than preventive. And, given the massive impact caused by Alyeska-induced in-migration, Alaska's remedial approach has often failed to mitigate the most serious impacts associated with pipeline development. Since the level of public services in Alaska was below the level in the lower 48 even before Alyeska construction began, the Alyeska project has exacerbated the public service deficit in Alaska.

C. Influence of In-Migration upon Alyeska Impacts

The historical phenomenon of in-migration has been repeated during the years of the Alyeska boom. Moreover, the level of this Alyeska-induced population in-migration has been increased because of deliberate policies that were primarily designed to give resident Alaskans preference for Alyeska jobs. These policies (Local Hire Act and the hiring by the Fairbanks unions) together with inadequate planning by the state resulted in tens of thousands of people in-migrating to Alaska. It is this large-scale population increase, spurred by the Alyeska-induced in-migration, that has caused and shaped the negative Alyeska impacts described in Part II of this testimony.

For example, historically during periods of boom-related population in-migration, the number of unemployed in-migrants has exceeded the number of new jobs created. This historical pattern has been repeated during the Alyeska boom. The number of unemployed workers throughout the state increased from 16,400 in January, 1975,

to 22,900 in January, 1976. The statewide unemployment rate also increased from 10.8% to 12.2% during this same period.¹ Even in Fairbanks, where pipeline activity has been the most intense, the total number of unemployed workers also increased last year.

Similarly, the current mismatch between jobs that need to be filled and the skills of the available labor pool can be directly traced to in-migration. Because of the emphasis on local or resident hire, thousands of resident Alaskans have left their jobs to take higher-paying Alyeska-related jobs. In turn, the vacated jobs have been filled by recent in-migrants. But many of the recent in-migrants do not have the requisite skills needed for the vacated jobs. In other words, the emphasis on local hire and the ensuing in-migration of people to Alaska created a mismatch between jobs and skills. Moreover, many of the people in-migrating to Alaska are travelling to those areas of the state where there are few job openings. In URSA's recently completed in-migration report for the U.S. Department of Labor, it was found that only 21% of the in-migrants entering Alaska were travelling to Anchorage while fully 33% of the new jobs were being created in Anchorage. Similarly, 31% were headed for Fairbanks while only 24% of new jobs were located in that area.

Another of the Alyeska impacts described in Part II was the shortfall or lag between population increases and corresponding increases in tax revenues. But for the massive population in-migration, Anchorage, Fairbanks and Valdez would not have experienced the sudden population increases that they underwent between 1973 and 1975. In turn, these jurisdictions would not have needed substantial increases in tax revenues were it not for their rapid population gains. The shortfall of revenue needed to pay for public services for the new residents from the lower 48 is a direct result of the population in-migration.

¹Unemployment (and unemployment rates) vary significantly in Alaska over the course of a year due to the extreme seasonality in unemployment. However, the increase in unemployment in Alaska due to Alyeska can be documented, no matter what time of the year one chooses. For example, from October, 1974, to October, 1975, the number of unemployed workers increased from 10,850 to 14,400. At the same time, the unemployment rate rose from 6.9% to 7.9%.

The Alyeska-induced in-migration also placed new demands on all private and public goods and services. In essence, the demand curve for these goods and services was pushed outward because of the tens of thousands of new in-migrants, while at the same time the supply curve remained constant or inelastic. The supply of such essential goods as housing, telephones, and sewer systems simply could not be expanded rapidly enough to satisfy the demands of Alaska's new residents. The housing vacancy rate in Fairbanks and Valdez is approximately zero; the sewer system in Fairbanks is large enough to satisfy the needs of only the pre-boom population; and complaints about the Fairbanks telephone system increased 69% last year, while service orders completed actually declined 20%.

Another aspect of the imbalance between the demand for and the supply of private and public goods and services is the extremely high rate of inflation in Alaska. Until the Alyeska boom, the inflation rate in Alaska had actually been less than the rate for the United States as a whole. However, the cost of living in Alaska is now increasing at a far higher rate than for the nation as a whole.

According to the U.S. Bureau of Labor Statistics, the consumer price index for Anchorage rose 13.8% in 1974 and 11.1% in 1975. The CPI for the U.S. in 1975 was approximately 7-7.5%.

Overall, the rapid population in-migration has meant that thousands of newly arrived people have had to be provided with necessary goods and services. Moreover, the influx of unemployed in-migrants has meant that vast amounts of public monies have had to be spent on providing costly social services. The high rate of inflation has meant that the dollar cost of supplying all these goods and services has escalated rapidly. And the lag between increased tax revenues and increased population has meant that new sources of public financing have had to be found.

Given the demand for goods and services by a vastly increased state population, it is easily understandable why state expenditures from the general fund (unrestricted revenue) grew from \$204.0 million in FY 1971 to \$333.3 million in FY 1975 and is projected to grow to \$674.4 million in FY 1977. This growth in state expenditures

has financed a rapid expansion in state and local government employment. State government employment alone has grown from an average of 10,300 in 1970 to 15,400 in 1975, and local government employment has grown from 8,100 to 13,400 during this same period.

The increase in state expenditures has also meant that the \$900 million that the State of Alaska received from the sale of oil and gas leases at Prudhoe Bay would be spent quickly. And in fact, as of spring, 1976, all of the \$900 million had been spent. Although it was logical and politically inevitable for the state to expend this \$900 in lease monies for new services in a time of major impact (instead of investing the funds or placing them in a permanent fund), the expenditure by the state accentuated the inflationary pressures generated by the Alyeska project.

Finally, the pay-off or benefit resulting from the expenditure by the state of the \$900 million was seriously diminished by the large scale population in-migration. The monies were spent providing new services or simply maintaining old ones to an expanded state population, instead of improving the quality and quantity of services to an existing population. Once again, the Alyeska-induced population in-migration was responsible for diminishing the positive aspects of the Alyeska project and accentuating the negative.

In summary, virtually all of the socioeconomic impacts associated with Alyeska project--inflation, shortages of vital goods and services, revenue shortfalls--are tied to recent and massive population increases. Clearly, far more than 56,000 people entered the state as in-migrants during the two-year Alyeska hire-up boom in 1974 and 1975. To understand the Alyeska impacts, therefore, it is essential to understand the historic in-migration dynamic of Alaska--a dynamic grounded on a boom psychology in which residents of the lower 48 have traditionally thought of Alaska as a place in which quick fortunes can be made; a dynamic accentuated by the location of hiring halls for the Alyeska project in Fairbanks; and--most importantly--a dynamic which was not mitigated by careful state planning before the Alyeska project began.

IV. SUMMARY

The impacts caused by the construction of the Alyeska pipeline can be understood only if placed within the socioeconomic context of Alaska. And the most important factor in Alaska's socioeconomic environment is the recurring historical phenomenon of population in-migration. This phenomenon has once again taken place during the years of peak Alyeska construction.

The level of Alyeska-induced population in-migration from the lower 48 has been unintentionally but nevertheless greatly increased because of policies which were intended to give resident Alaskans employment preference in the hiring of Alyeska workers. The Local Hire Act and the role of the Fairbanks unions made it essential that people in the lower 48 who desired Alyeska jobs in-migrate to Alaska simply because most of the pipeline jobs which were available could in fact only be secured in Alaska. The State of Alaska exacerbated the problems caused by in-migration by not foreseeing that the very policies that it favored (a poorly enforced Local Hire Act and the hiring by the Fairbanks unions) would also cause negative impacts. Moreover, the state's remedial efforts that were designed to mitigate the impacts of the large scale in-migration (such as special impact assistance funds and the certification of residency) were either seriously flawed or else implemented too late to be truly effective.

The large scale Alyeska-induced in-migration led directly to the negative impacts which were described in Part II of this testimony and which are well-known throughout the United States and Canada. The high rate of unemployment, the mismatch between the skills of the in-migrants and skills needed to fill existing jobs, the lag between increased public expenditures and increased tax revenues, the strain placed on the supply of a variety of private public goods and services, and finally the high rate of inflation in Alaska--all can be traced to the recent population in-migration.

In short, one must be extremely careful about saying that the Alyeska project caused certain impacts in Alaska. The impacts described in Part II of this testimony were critically shaped and controlled by the entire socioeconomic environment of Alaska. If there had been no large scale population in-migration, the impacts associated with the Alyeska project would have been far different.

It is not correct to assume that a pipeline construction project in the Northwest Territories will necessarily produce the same impacts as did Alyeska. What is crucial in determining the impacts of any comparable project is the entire socioeconomic environment of the area in which the project is to be built. To the extent that the socioeconomic environment of the Northwest Territories is different from Alaska's, both the impacts associated with any future construction project and the policies that should be formulated in order to mitigate possible negative impacts will also be different. Thus, any analysis of pipeline impacts in the Northwest Territories must address such questions as: What is the socioeconomic context in the Northwest Territories? Does the Northwest Territories have a historic in-migration dynamic similar to that of Alaska? Given past experience, will a major construction project in the Northwest Territories lead to large scale in-migration? Will the hiring for the pipeline project occur in the Northwest Territories?

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RELATING THE ALASKA EXPERIENCE
TO THE NORTHWEST TERRITORIES
AND THE ARCTIC GAS PROJECT

Mr. Boorkman has described the complex cause-effect relationships that exist in Alaska with respect to the impacts that are commonly attributed to the Alyeska project. Implicit in his presentation is the fact that it is dangerous to ignore or downgrade the importance of the socio-economic setting in which a project takes place and the various dynamic elements that ultimately determine both the positive and the negative effects. The obvious danger is that of leaping to the conclusion that impacts of the kind and magnitude experienced in Alaska would automatically result from a comparable project in the Mackenzie Valley. More important is the fact that a failure to properly appreciate the real cause-effect relationships in Alaska can lead to a failure to develop and implement the policies and procedures that may be required to ensure that an Alaska-type situation does not develop in the Mackenzie Valley.

Much of the testimony that will be presented by subsequent panels will provide the basis for our view that the Arctic Gas project will not create an Alaska-type situation in the Mackenzie Valley. This is not to say that some of the same kinds of impacts will not be present. Rather, we believe that, in view of the basic differences between the two regions and the projects themselves, and with the implementation of

appropriate measures, the magnitude and therefore the seriousness of those impacts that could occur will be greatly reduced.

Since subsequent testimony will deal in detail with specific impacts and mitigative measures, I would like at this point to focus on the questions posed at the end of Mr. Boorkman's testimony with regard to the socio-economic context in the Mackenzie Valley, particularly the question of massive in-migration that has been so critical in the case of Alaska. To properly round out the picture, I will also be noting the key mitigative measures that will be dealt with in detail at a later stage. Since much of the basic socio-economic context material has been presented in one form or another by other witnesses, or is relatively well known to the participants and to you Sir, I will be brief.

Population and In-Migration

As Dr. Hobart pointed out, the population of the Northwest Territories has grown steadily since the early 1900's to a level about six times what it was 60 years ago. The components of this growth have included a relatively high rate of natural increase, particularly among native residents, plus in-migration from southern Canada. However, there have been very few surges in this growth due to in-migration and no declines as a result of out-migration; in fact, analyzing the period 1941-1951 and five year periods from 1951 through 1971, it is apparent that only in 1941-1951 did in-migration exceed

natural increases as a component of population growth.

The in-migration that has occurred has not been insignificant relative to the total population. The key point, however, is that in-migration of new residents as opposed to transients has been geared primarily to long-term development activities. For example, as Dr. Hobart pointed out, in-migration was associated with the opening of the Yellowknife and Echo Bay mines. Similarly, there was in-migration associated with the growth in the transportation sector. In recent years, the occurrence of in-migration has been associated primarily with the growth in government services.

In other words, there has not been rapid and massive in-migration of permanent residents with resultant unemployment and unmanageable pressures of the type experienced in Alaska.

There have, of course, been resource development and other projects that have required large numbers of transient workers from the south. Evidence on this type of transient in-migration has already been placed before the Inquiry with respect to the Yukon and the building of the Alaska Highway. Similar situations existed in the case of the Dew Line and most recently the petroleum industry activities in the Delta region..

Again, however, the situation has been very much different than that in Alaska. Unlike Alaska, transient workers in the

Canadian north have operated primarily from construction camps, did not establish residency status and left the region at the completion of a project.

The reasons for this basic and critical difference in the Canadian north as compared to Alaska are many and varied. Perhaps most important is the fact that the Canadian northern frontier is contiguous to the entire country. Not only are the majority of Canadians relatively close to the northern frontier, but projects are continually being undertaken in one area or another. This is in comparison to the isolation of Alaska relative to the lower 48 states. As a result, the Canadian north does not seem to have the same romantic connotation of a "last frontier", with the corresponding tendency to attract a larger number of in-migrants from outside than justified by the size of a specific undertaking.

Furthermore, the relative distances result in southern centres such as Edmonton performing the logistics and supply functions that in Alaska are performed by Anchorage and Fairbanks. Apart from its effect on directly limiting in-migration to the north, the southern orientation of the supply function tends to discourage the re-location of businesses to the north and therefore further limits in-migration. Even though Arctic Gas will be procuring some goods and services locally, a subject that we will go into in greater detail at a later stage, the basic north-south linkages will not change rapidly.

In general, the factors that have in the past prevented massive Alaska-type in-migration can be expected to continue in the future. In addition, Arctic Gas intends to attempt to directly limit in-migration during the construction phase by requiring that all non-residents are hired only in southern locations. This policy, and related measures with respect to camps and the movement of personnel to and from the north on rotation or at the end of a construction season, will be presented in detail by a subsequent panel.

We are not taking the position that there will be no in-migration to the region as a result of the project. In fact, a subsequent panel will deal specifically with the anticipated growth of the major communities following pipeline construction. Again, there will be policies that can be implemented by Arctic Gas and the producers to ensure that the growth rates are of manageable proportions. We are, however, convinced that the massive in-migration phenomenon experienced by Alaska will not prevail in the Mackenzie Valley. This has a direct consequence with respect to the occurrence and likely magnitude of the type of impacts that Mr. Boorkman has shown to be a result of in-migration in Alaska.

The Role of Government

The other crucial difference between Alaska and the Canadian north is the role of government. In recent years, government has been, and will continue for some time to come, to be the most dominant influence on the pattern of

growth in the Northwest Territories. Self-determination in government has grown steadily, but slowly, in the past decade, but effective control either directly or fiscally over most important governmental decisions remains in Ottawa. The result has been a relatively closed, planned economy, characterized by a high level of government participation in any activity. Growth has been steady over time with government expenditures the leading economic growth sector. Recently this has been due in the main, to Federal policies for the north which call for upgrading of services and the quality of life to southern standards.

The process of government in the Northwest Territories is heavily subsidized by the more affluent parts of Canada, with annual expenditures on public services far outstripping annual revenues from all forms of taxation. The division of such revenue-producing powers that exist is such that the bulk of direct taxation revenue goes to the Federal government. Since the pattern of growth has been so tightly controlled and carefully managed, one result has been a relatively high level of government planning capacity in both the Territorial and Federal governments and in communities through the use of consultants. But more significant has been the widespread acceptance of the importance of planned growth. Therefore unlike some of the Alaskan communities, communities in the Territories, even the larger, more commercially oriented are conscious of impacts of large-scale development and seem

willing to forego some economic activity in order to avoid harmful impacts.

An example of the control process in the Northwest Territories can be seen by examining disposition of land, one of the primary factors of production. Land, with the exception of a minute quantity within the boundaries of organized settlements, is almost totally controlled by one level of government or another, and private ownership is difficult to acquire. Municipal, Territorial and Federal Governments' control over all forms of development in the Territories, especially in relation to land ownership and usage both outside and along the pipeline corridor (Area Development Ordinance), will tend to discourage, if not restrict the number of in-migrants attracted to the Northwest Territories. Leasing or buying residential land is much more complex and restrictive in the Territories than in Alaska; the Federal and Territorial governments are major initiators and customers of new housing and landlords of existing housing stock, thus controlling the rental market both in availability and price; and, generally, the dominant presence of both levels of governments in most aspects of personal and business life will not only tend to limit the number of migrants to the Territories, but also to directly affect inflationary, level of service and other effects.

Another evidence of government presence is in the area of planning; a considerable amount of which has already taken

place to identify the type and extent of impact on the communities in the Mackenzie Valley region arising out of hydro-carbon activities in general and the gas pipeline construction in particular. Further, there are master plans for each community which set guidelines for land use - if a request does not conform with that plan there is little or no hope of approval. The Territorial government planners may impose certain restrictions on growth, or impose a type of zoning even if the local zoning by-laws would not preclude a particular development.

This commitment to and emphasis on preplanning will not only identify expected shortfalls in community and other public services but also provide the necessary lead-time to take corrective action by all the parties concerned.

Overall, the situation with respect to the role of government and the restrictions on the private sector in the Canadian north are in sharp contrast to the situation described by Mr. Boorkman.

DAVID BOORKMAN
areas of
education: **URSA PARTNER**
Attorney, Planner, Urban Sociologist

1974 to present

Mr. Boorkman is an attorney with a broad background in planning, criminal justice, education, and social, economic and environmental impact assessment. As both an attorney and a consultant, Mr. Boorkman has planned, evaluated and provided technical assistance to both public and private programs in a wide range of functional areas: criminal justice, health, housing, economic development, revenue sharing, community development, management analysis, new town development, transportation, and local government organization. He has served as the project director for major social, economic and environmental evaluation programs and has also directed both national and local training and technical assistance programs, including nationwide NILECJ training on the Des Moines Community-based Corrections Project.

EXPERIENCE:

1974 - present

Project Director, LEAA Training and Technical Assistance Project. Responsible for directing a major technical assistance effort involving the replication of the Des Moines, Iowa, community corrections system in six selected communities throughout the U.S. Coordinated logistical planning with LEAA staff at the central, regional and local level. Part of the project responsibility is the design, development and implementation of a major training effort aimed at familiarizing state and local criminal justice system participants with community corrections generally and the Des Moines Program specifically.

1971 - 1973

1975 - present

Project Director, Design and Conduct Child Abuse and Neglect Training, National Center on Child Abuse and Neglect, Office of Child Development, DHEW. Responsible for designing and conducting training programs in the Diagnosis and Treatment of Child Abuse and Neglect for 870 trainees from four disciplines - law, social work, health and education. Separate training programs conducted for non-Native (five-day conferences) and Native Americans (three-day conferences). Designed and coordinated logistical and reimbursement systems for all trainees.

1972

1974 - 1975

Project Administrator, Development of Child Abuse and Neglect Training Materials, National Center on Child Abuse and Neglect, Office of Child Development, DHEW. Responsible for developing curricula and training materials to be used by professionals in the fields of health and medicine, law, social work and education in the identification, reporting and referral of child abuse and neglect.

1973 - 1976

Project Director, Socioeconomic impact assessment of pipeline impact on the state of Alaska. Responsible for developing a comprehensive analysis of the impact of pipeline development on the entire state delivery system. Included an in-depth analysis and projection of future needs in the following

areas: criminal justice, housing, social services, education, revenue, population, labor and employment, economic development, governance.

- 1974 to present Project Director, Alaska Manpower Study, U.S. Department of Labor, Region X. Responsible for identifying and analyzing all major forces of economic change in Alaska between 1974 and 1980 in terms of manpower impact, migration patterns, job mobility, unemployment fund, implications, etc.
- 1973 Project Director, Saks Fifth Avenue Environmental Impact Report. Developed an environmental evaluation report for the City of San Francisco Planning Department on the environmental impact of a new commercial development in downtown San Francisco.
- 1972 - 1973 Project Director, HUD Urban Technical Services Program. Responsible for the selection, training and placement of 200 urban specialists in small and medium sized local governments throughout the nation. Designed local government, revenue sharing and community development training programs which prepared urban specialists for assignments in participating local governments. Training subjects included: criminal justice planning and program development, categorical grant programs, revenue sharing program, community development strategies, housing, municipal fiscal planning and monitoring, etc.
- 1971 - 1973 Attorney and Consultant, City of St. Paul Island, Alaska. Responsible for development of community development planning, municipal ordinance development, organization of local adjudication system, and housing strategies.
- 1972 Consultant, Federal Highway Administration, U.S. Department of Transportation. Responsible for the development of a social feasibility model by which the potential social disruption of alternative highway corridors can be predicted and quantified by means of neighborhood impact profiles.
- 1972 Consultant, Fort Lincoln New Town Development, Washington, D.C. Responsible for evaluation of social service demands associated with the development of a new community. Areas of responsibility included public safety, housing, health, education, transportation recreation and culture, manpower training and development.
- 1971 - 1972 Evaluation Consultant, Model Cities Programs, Gary, Detroit, Buffalo. Responsible for evaluating Model City Program component projects in several cities. Focused on such functional areas as public safety, housing, manpower training, community development, fiscal management.

- 1971 Project Director and Consultant, Pico-Union Neighborhood Council. Assisted in the development of a delinquency prevention project for a low-income Mexican-American community in Los Angeles. The project focused on the involvement of local gang members to build vest-pocket parks in several areas of Los Angeles.
- 1971 Project Counsultant, Pechanga Band of Mission Indians, Riverside County, California. Responsible for development of economic development feasibility analysis of the potential uses of reservation land.
- 1971 Project Consultant, United Filipino Organization, San Francisco. Responsible for the development of housing development program, fiscal management assistance and community organization for a San Francisco Filipino organization.
- 1970 - 1971 Project Consultant, Relocation Training and Technical Assistance Project, U.S. Department of Housing and Urban Development. Responsible for providing relocation technical assistance to Model Cities Programs as part of a national technical assistance effort focusing on twenty-one cities. Provided technical assistance in Gary and Detroit.
- 1969 - 1970 Assistant to the Project Manager, Planning and Evaluation Training and Technical Assistance Contract, U.S. Department of Housing and Urban Development. Responsible for administration of a national technical assistance project which provided consultant assistance in continuing planning and evaluation activities to a total of twenty-one Model Cities Programs throughout the nation.
- 1969 Attorney and Organizer, Street Academy Program, New York City. Responsible for organization, training and legal representation of participants in Street Academy Program, a program which ran store-front schools and delinquency centers in Harlem for high school drop-outs and provided a wide range of direct as well as referral services.
- 1966 - 1967 Deputy to Legal Services Director, New York Regional Office, Office of Economic Opportunity. Responsible for developing, funding and monitoring legal services programs in the N.E. Region. Assisted in the development of neighborhood legal services offices for the representation of individuals and groups unable to retain private counsel because of poverty.

EDUCATION:

1968 LL.B., Yale Law School
1965 BA, Carleton College

PROFESSIONAL ORGANIZATIONS:

Member of California Bar
Member of New York Bar
Member of California Probation, Parole and Correctional
Association
Honorary Member of Arkansas Law Enforcement Officers
Association

DAVID M. WEINSTEIN

URSA SENIOR STAFF

Mr. Weinstein, an attorney and Woodrow Wilson Fellow in economics, has professional experience in both areas. Before coming to URSA, he has served as an economist for Ralph Nader and the Seattle First National Bank. More recently, he was a practicing attorney. For URSA, Mr. Weinstein has analyzed the Alaska economy as a means to evaluate existing econometric models of the state's economy. He has also prepared written testimony for the Federal Power Commission on the economic impacts in Alaska of competing gas pipeline proposals.

EXPERIENCE:

1974-present URBAN AND RURAL SYSTEMS ASSOCIATES (URSA), San Francisco.

Senior Staff. Analyzed and defined the economic model of the state of Alaska which URSA developed for the Alaska Arctic Gas Pipeline Company (AAGPC). Also critiqued and acquired full working knowledge of all other econometric models that were constructed in order to predict the consequences of the Alyeska or AAGPC pipelines upon the economy of Alaska.

Senior Staff. Region X DOL Alaska Manpower Study; evaluated existing regression model of Alaska economy and prepared forecast of future impact of selected economic and social events upon the state's manpower needs and economic well-being.

Senior Staff. LEAA/NILECO Exemplary Projects Contract; assisted in the development of the Des Moines Community Corrections Training Manual. His primary responsibilities were to prepare a statement demonstrating the scope and variety of corrections programs in the U.S. and to compile a bibliography of relevant publications.

Manager, URSA Seattle Branch Office.

1973-1974 SULLIVAN, JONES & ARCHER, San Francisco.

This law firm specialized in business litigation, especially in antitrust and securities law. Mr. Weinstein wrote briefs and memoranda in cases as disparate as those dealing with the NCAA's "1.6" Rule, with alleged monopolization in the paper industry, and with alleged price discrimination in the bread industry.

1972-1973

EQUAL EMPLOYMENT OPPORTUNITY COMMISSION (EEOC) LITIGATION CENTER, San Francisco.

The San Francisco Litigation Center is in charge of enforcing Title VII of the 1964 Civil Rights Act for the Western region of the United States. Mr. Weinstein conducted extensive investigations and informal pre-trial discovery of firms engaged in banking and retail merchandising.

1971

MCDONALD, HOAGUE & BAYLESS, Seattle.

Drafted and argued in the state superior court a motion for a change of venue in the Joseph Alioto fee-splitting case.

1970-1971

YALE UNIVERSITY.

Taught criminal law in an experimental inner-city high school in New Haven, Connecticut.

1970

CENTER FOR THE STUDY OF RESPONSIVE LAW (Ralph Nader), Washington, D.C.

Mr. Weinstein was part of a two-man team which investigated the Department of Transportation and which analyzed the consequences of the newly-passed National Environmental Policy Act and the environmental impact statements required by that Act. Mr. Weinstein further made an extensive economic investigation, including a cost-benefit analysis, of the federal highway program and the federal highway trust fund.

1968-1968

SEATTLE FIRST NATIONAL BANK, Seattle.

Worked as an economist in the economic research department of the bank; used regression and other statistical and econometric techniques to project bank demand deposits and loans and to estimate future levels of state income, population and employment.

EDUCATION:

1972

J.D., Yale University.

1970

M.A. Economics, Stanford University, Woodrow Wilson Fellow.

1968

B.A. Economics, Amherst College, Summa Cum Laude.

